

L3 L2.clm.

4 L3

L2 (vcam\$)same(antibod\$)same(hemopoie\$ or hematopoie\$ or stem or progenitor or cd34\$) 119 L2

3 L1

L1 masinovsky.in.

END OF SEARCH HISTORY

08/448649

**Using default format because multiple data bases are involved.**

L1: Entry 1 of 3

File: USPT

Sep 26, 2000

US-PAT-NO: 6123915  
DOCUMENT-IDENTIFIER: US 6123915 A

TITLE: Methods for using agents that bind to VCAM-1

DATE-ISSUED: September 26, 2000

**INVENTOR-INFORMATION:**

NAME	CITY	STATE	ZIP CODE	COUNTRY
<u>Masinovsky; Boris</u>	Bellevue	WA		
Gallatin; William Michael	Mercer Island	WA		
Simmons; Paul J.	Seattle	WA		

US-CL-CURRENT: 424/1.49; 424/143.1, 424/152.1, 424/172.1, 424/178.1, 530/388.2,  
530/388.73, 530/391.1, 530/391.3, 530/391.7

<a href="#">Full</a>	<a href="#">Title</a>	<a href="#">Citation</a>	<a href="#">Front</a>	<a href="#">Review</a>	<a href="#">Classification</a>	<a href="#">Date</a>	<a href="#">Reference</a>	<a href="#">Sequences</a>	<a href="#">Attachments</a>	<a href="#">Claims</a>	<a href="#">KMC</a>	<a href="#">Drawn D</a>
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 2. Document ID: US 5827670 A

L1: Entry 2 of 3

File: USPT

Oct 27, 1998

US-PAT-NO: 5827670  
DOCUMENT-IDENTIFIER: US 5827670 A  
\*\* See image for Certificate of Correction \*\*

TITLE: Methods of isolating and detecting bone marrow stromal cells with VCAM-1-specific antibodies

DATE-ISSUED: October 27, 1998

**INVENTOR-INFORMATION:**

NAME	CITY	STATE	ZIP CODE	COUNTRY
<u>Masinovsky; Boris</u>	Bellevue	WA		
Gallatin; William Michael	Mercer Island	WA		
Simmons; Paul J.	Seattle	WA		

US-CL-CURRENT: 435/7.21; 435/2

<a href="#">Full</a>	<a href="#">Title</a>	<a href="#">Citation</a>	<a href="#">Front</a>	<a href="#">Review</a>	<a href="#">Classification</a>	<a href="#">Date</a>	<a href="#">Reference</a>	<a href="#">Sequences</a>	<a href="#">Attachments</a>	<a href="#">Claims</a>	<a href="#">KMC</a>	<a href="#">Drawn D</a>
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 3. Document ID: US 5206345 A

L1: Entry 3 of 3

File: USPT

Apr 27, 1993

US-PAT-NO: 5206345  
DOCUMENT-IDENTIFIER: US 5206345 A

\*\* See image for Certificate of Correction \*\*

TITLE: IL-4 and TNF induce mAb 6G10-recognized expression on bone marrow stromal cells

DATE-ISSUED: April 27, 1993

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Masinovsky; Boris	Bellevue	WA		
Gallatin; William M.	Mercer Island	WA		
Simmons; Paul J.	Seattle	WA		

US-CL-CURRENT: 530/388.7; 435/7.21, 436/548

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Drawn D](#)

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Term	Documents
MASINOVSKY	83
MASINOVSKIES	0
MASINOVSKYS	0
MASINOVSKY.IN..PGPB,USPT.	3
(MASINOVSKY.IN.).PGPB,USPT.	3

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Search Results - Record(s) 1 through 4 of 4 returned.

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1. Document ID: US 20030229212 A1

Using default format because multiple data bases are involved.

L3: Entry 1 of 4

File: PGPB

Dec 11, 2003

PGPUB-DOCUMENT-NUMBER: 20030229212

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030229212 A1

TITLE: Non-affinity purification of proteins

PUBLICATION-DATE: December 11, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Fahrner, Robert	San Mateo	CA	US	
Follman, Deborah	West Lafayette	IN	US	
Lebreton, Benedicte	San Francisco	CA	US	
Reis, Robert van	Emerald Hills	CA	US	

US-CL-CURRENT: 530/417

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KWMC](#) | [Drawn D](#)

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2. Document ID: US 5843438 A

L3: Entry 2 of 4

File: USPT

Dec 1, 1998

US-PAT-NO: 5843438

DOCUMENT-IDENTIFIER: US 5843438 A

TITLE: Peripheralization of hematopoietic stem cells

DATE-ISSUED: December 1, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Papayannopoulou, Thalia	Seattle	WA		

US-CL-CURRENT: 424/130.1; 424/133.1, 424/135.1, 424/143.1, 424/144.1, 424/152.1,  
424/153.1, 424/156.1, 424/85.1, 424/85.2

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KWMC](#) | [Drawn D](#)

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3. Document ID: US 5824304 A

L3: Entry 3 of 4

File: USPT

Oct 20, 1998

US-PAT-NO: 5824304

DOCUMENT-IDENTIFIER: US 5824304 A

TITLE: Peripheralization of hematopoietic stem cells

DATE-ISSUED: October 20, 1998

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Papayannopoulou; Thalia	Seattle	WA	98122	

US-CL-CURRENT: 424/130.1; 424/140.1, 424/144.1, 424/156.1, 424/85.1, 530/388.85,  
530/389.6[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Drawn D](#) 4. Document ID: US 5695755 A

L3: Entry 4 of 4

File: USPT

Dec 9, 1997

US-PAT-NO: 5695755

DOCUMENT-IDENTIFIER: US 5695755 A

TITLE: Peripheralization of hematopoietic stem cells

DATE-ISSUED: December 9, 1997

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Papayannopoulou; Thalia	Seattle	WA	98144	

US-CL-CURRENT: 424/130.1; 424/140.1, 424/144.1, 424/156.1, 424/85.1, 530/388.85,  
530/389.6[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [KMC](#) | [Drawn D](#)[Clear](#)[Generate Collection](#)[Print](#)[Fwd Refs](#)[Bkwd Refs](#)[Generate OACS](#)

Term	Documents
2.CLM.PGPB,USPT.	4
(L2.CLM.).PGPB,USPT.	4

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*PGPB, USPT; PLUR=YES; OP=ADJ*

L3 L2.clm.

4 L3

L2 (vcam\$)same(antibod\$)same(hemopoie\$ or hematopoie\$ or stem or progenitor or cd34\$) 119 L2

L1 masinovsky.in.

3 L1

END OF SEARCH HISTORY

L3: Entry 4 of 4

File: USPT

Dec 9, 1997

US-PAT-NO: 5695755  
DOCUMENT-IDENTIFIER: US 5695755 A

TITLE: Peripheralization of hematopoietic stem cells

DATE-ISSUED: December 9, 1997

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Papayannopoulou; Thalia	Seattle	WA	98144	

US-CL-CURRENT: 424/130.1; 424/140.1, 424/144.1, 424/156.1, 424/85.1, 530/388.85,  
530/389.6

## CLAIMS:

I claim:

1. A method of treating cancer in a patient comprising the steps of:
  - (1) peripheralizing CD34+ cells by administering an anti-VLA-4 antibody which blocks the binding of VLA-4 antigen on the surface of said CD34+ cells to VCAM or fibronectin;
  - (2) collecting peripheral blood containing the CD34+ cells by leukapheresis;
  - (3) enriching the CD34+ cells by immunoabsorption using anti-CD34 antibodies;
  - (4) administering chemotherapy and/or radiotherapy to the patient; and
  - (5) returning the enriched CD34+ cells to the patient's circulating blood.
2. The method according to claim 1, further comprising the step of administering a stimulating agent of CD34+ cell proliferation in vivo prior to leukapheresis, said stimulating agent being 5-fluorouracil or a cytokine that stimulates hematopoietic cells to proliferate.
3. The method according to claim 1, further comprising the step of expanding the enriched CD34+ cells ex vivo prior to returning the cells to the patient's circulating blood.
4. The method according to claim 2, further comprising the step of expanding the enriched CD34+ cells ex vivo prior to returning the cells to the patient's circulating blood.
5. The method according to claim 1, wherein the anti-VLA-4 antibody is selected from the group consisting of an antibody which is human, mouse/human chimeric, single chain, and humanized, or Fab, Fab', F(ab')2 or F(v) fragments thereof.
6. The method according to claim 1, wherein at least a portion of the

CD34.sup.+ cells are hematopoietic stem cells.

7. The method according to claim 2, wherein the cytokine is selected from the group consisting of G-CSF, stem cell factor, GM-CSF, M-CSF, T-SCF, SCPF, IL-1, IL-2, IL-3, IL-4, IL-6 and IL-11.
8. The method according to claim 7, wherein the cytokine is G-CSF.
9. The method according to claim 2, wherein the stimulating agent is administered before administering the anti-VLA-4 antibody.
10. The method according to claim 2, wherein the anti-VLA-4 antibodies is administered simultaneously with the stimulating agent.

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L3: Entry 3 of 4

File: USPT

Oct 20, 1998

US-PAT-NO: 5824304  
DOCUMENT-IDENTIFIER: US 5824304 A

TITLE: Peripheralization of hematopoietic stem cells

DATE-ISSUED: October 20, 1998

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Papayannopoulou; Thalia	Seattle	WA	98122	

US-CL-CURRENT: 424/130.1; 424/140.1, 424/144.1, 424/156.1, 424/85.1, 530/388.85,  
530/389.6

## CLAIMS:

I claim:

1. A method of treating AIDS in a patient comprising the steps of:

(1) peripheralizing CD34+ cells by administering an anti-VLA-4 antibody which blocks the binding of VLA-4 antigen on the surface of said CD34+ cells to VCAM or fibronectin;

(2) collecting peripheral blood containing the CD34+ cells by leukapheresis;

(3) enriching the CD34+ cells by immunoabsorption using anti-CD34 antibodies;

(4) administering chemotherapy and/or radiotherapy to the patient; and

(5) returning the enriched CD34+ cells to the patient's circulating blood.

2. The method according to claim 1, further comprising administering an anti-HIV agent to the patient prior to returning the enriched CD34.sup.+ cells to the patient's circulating blood.

3. The method according to claim 1, further comprising the step of administering a stimulating agent of CD34+ cell proliferation in vivo prior to leukapheresis, said stimulating agent being 5-fluorouracil or a cytokine that stimulates hematopoietic cells to proliferate.

4. The method according to claim 1, further comprising the step of expanding the enriched CD34.sup.+ cells ex vivo prior to returning the cells to the patient's circulating blood.

5. The method according to claim 2, further comprising the step of administering a stimulating agent of CD34.sup.+ cell proliferation in vivo prior to leukapheresis.

6. The method according to claim 2, further comprising the step of expanding the enriched CD34.sup.+ cells ex vivo prior to returning the cells to the

patient's circulating blood.

7. The method according to claim 1, wherein the anti-VLA-4 antibody is selected selected from the group consisting of an antibody which is human, mouse/human chimeric, single chain, and humanized or Fab, Fab', F(ab')2 or F(v) fragments thereof.

8. The method according to claim 1, wherein at least a portion of the CD34.sup.+ cells are hematopoietic stem cells.

9. The method according to claim 1, wherein the cytokine is selected from the group consisting of G-CSF, stem cell factor, GM-CSF, M-CSF, T-SCF, SCPF, IL-1, IL-2, IL-3, IL-4, IL-6 and IL-11.

10. The method according to claim 9, wherein the cytokine is G-CSF.

11. The method according to claim 3, wherein the stimulating agent is administered before administering the anti-VLA-4 antibody.

12. The method according to claim 3, wherein the anti-VLA-4 antibodies is administered simultaneously with the stimulating agent.

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File: USPT

Dec 1, 1998

US-PAT-NO: 5843438

DOCUMENT-IDENTIFIER: US 5843438 A

TITLE: Peripheralization of hematopoietic stem cells

DATE-ISSUED: December 1, 1998

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Papayannopoulou; Thalia	Seattle	WA		

US-CL-CURRENT: 424/130.1, 424/133.1, 424/135.1, 424/143.1, 424/144.1, 424/152.1, 424/153.1,  
424/156.1, 424/85.1, 424/85.2

## CLAIMS:

I claim:

1. A method of peripheralizing CD34.sup.+ cells *in vivo* comprising the step of administering an anti-VLA-4 antibody or an anti-VCAM-1 antibody which blocks the binding of VLA-4 antigen on the surface of the CD34.sup.+ cells to VCAM or fibronectin.
2. The method according to claim 1, wherein the anti-VLA-4 or anti-VCAM-1 antibody is a mouse/human, chimeric, single chain, or humanized or Fab, Fab', F(ab').sub.2 or F(v) fragments thereof.
3. The method according to claim 1, wherein at least a portion of the CD34.sup.+ cells are hematopoietic stem cells.
4. The method of claim 1, further comprising the step of administering a stimulating agent of CD34.sup.+ cell proliferation *in vivo*, said stimulating agent being 5-fluorouracil or a cytokine that stimulates hematopoietic cells to proliferated.
5. The method according to claim 2, further comprising the step of administering a stimulating agent of CD34.sup.+ cell proliferation *in vivo*, said stimulating agent being 5-fluorouracil or a cytokine that stimulates hematopoietic cells to proliferated.
6. The method according to claim 3, further comprising the step of administering a stimulating agent of hematopoietic stem cell proliferation *in vivo*, said stimulating agent being 5-fluorouracil or a cytokine that stimulates hematopoietic cells to proliferated.
7. The method according to claim 4, wherein the stimulation is mediated by a cytokine selected from the group consisting of granulocyte colony-stimulating factor (G-CSF), stem cell factor, granulocyte-macrophage colony-stimulating factor (GM-CSF), macrophage colony-stimulating factor (M-CSF), totipotent stem cell factor (T-SCF), stem cell proliferation factor (SCPF), interleukin-1 (IL-1), interleukin-2 (IL-2), interleukin-3 (IL-3), interleukin-4 (IL-4),

interleukin-6 (IL-6) and interleukin-11 (IL-11).

8. The method according to claim 5, wherein the stimulation is mediated by a cytokine selected from the group consisting of granulocyte colony-stimulating factor (G-CSF), stem cell factor, granulocyte-macrophage colony-stimulating factor (GM-CSF), macrophage colony-stimulating factor (M-CSF), totipotent stem cell factor (T-SCF), stem cell proliferation factor (SCPF), interleukin-1 (IL-1), interleukin-2 (IL-2), interleukin-3 (IL-3), interleukin-4 (IL-4), interleukin-6 (IL-6) and interleukin-11 (IL-11).

9. The method according to claim 6, wherein the stimulation is mediated by a cytokine selected from the group consisting of granulocyte colony-stimulating factor (G-CSF), stem cell factor, granulocyte-macrophage colony-stimulating factor (GM-CSF), macrophage colony-stimulating factor (M-CSF), totipotent stem cell factor (T-SCF), stem cell proliferation factor (SCPF), interleukin-1 (IL-1), interleukin-2 (IL-2), interleukin-3 (IL-3), interleukin-4 (IL-4), interleukin-6 (IL-6) and interleukin-11 (IL-11).

10. The method according to claim 7, wherein the cytokine is G-CSF.

11. The method according to claim 8, wherein the cytokine is G-CSF.

12. The method according to claim 9, wherein the cytokine is G-CSF.

13. The method according to claim 10, wherein the G-CSF is administered before administering the anti-VLA-4 antibody or anti-VCAM-1 antibody.

14. The method according to claim 11, wherein the G-CSF is administered before administering the anti-VLA-4 antibody or anti-VCAM-1 antibody.

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